

Page 1

Tuesday, April 21, 2015 1:59:12 PM

Item ID: D3303-3

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Bracket

Stop *NS2*

Start Date: 4/20/15 **Start Qty:** 2.00

2

Cust Item ID:

Required Date: 4/20/15 **Req'd Qty:** 2.00

2

Customer:

Reference:

Approvals: **Process Plan:** MCS **Date:** 15-04-22 **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3303	Rev B

100

100

FLOW WATER JET

0,00

Waterjet

Memo

0.00

FLOW CNC Waterjet

2024-040"

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Memo

0.00

Quality Control

120

QC8- Inspect parts - second check

0.00

120

QC

Memo

0.00

Quality Control

DAS
 38
 9-8

APR 30 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																																														
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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
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Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER : ☐			

Work Order ID 131985

Tuesday, April 21, 2015 1:59:12 PM

131985

Page 3

Item ID: D3303-3 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Bracket
Start Date: 4/20/15 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 4/20/15 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Chemical Conversion Coat per QSI005 4.1	0.00							
160									
HandFinish	Memo	0.00							
Hand Finishing									
170	QC7-Inspect Chemical Conversion Coat	0.00							
170									
QC	Memo	0.00							
Quality Control									
180	Identify as per dwg & Stock Location: <u>CA</u>	0.00							
180									
Packaging	Memo	0.00							
Packaging									

2 0 15-5-5

(2)

DAS
38
9-89
MAY 05 2015

DAS
28
9-89

DAS
27
9-89

2 MAY 05 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY																																																											
☐ Environment	☐ Design	☐ Doc/Data	☐ Equip/Tooling	☐ Handling/Pre	☐ Material	☐ Internal Transport	☐ Tribal Knowledge	☐ LOA	☐ Substation	☐ Past Expiry Date	☐ Misidentified	☐ No Re-verification	☐ Operator	☐ Offset/Setup	☐ Supplier	☐ Training	☐ Use for Testing	☐ Poor Information	☐ Rushing	☐ Product Improvement	☐ Process Improvement	☐ Manufacturing Process	☐ Past Due	☐ Pressure/Forced	☐ Bending	☐ Centre Not Concentric	☐ Cracks	☐ Crimp/Kink/Ripple/Wave	☐ Cuffs	☐ Crushing	☐ Heat Treat	☐ Wave/Twist in Tube	☐ Marks/Chatter	☐ Temperature/Cure	☐ Set-up	☐ BOM/Route	☐ Broken/Damage/Defect	☐ Inspection Incomplete/Unqualified	☐ Contamination	☐ Countersink	☐ Cut Too Short	☐ Instructions Incomplete/Unclear	☐ Drill Holes	☐ Power Loss/Surge	☐ Folio/Program	☐ Grain	☐ Weld	☐ Wrong Stock Pulled	☐ Out of Sequence	☐ Off-set	☐ Mislabeled	☐ Fit/Function	☐ Misaligned/off center	☐ Positioned Wrong	☐ Outside Dimensions	☐ Over/Under tolerance	☐ Part Incorrect	☐ Part Lost/Missing	☐ Part Moved	☐ Drawing	☐ Finish	☐ Misread	☐ Turning Sequence
																								☐ OTHER : _____																																							

Work Order ID 131985***131985***

Page 4

Item ID: D3303-3

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Bracket

Stop ***NS2***Start Date: 4/20/15 Start Qty: 2.00 ***2***

Cust Item ID:

Required Date: 4/20/15 Req'd Qty: 2.00 ***2***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC21- Final Inspection - Work Order Release	0.00							
190									
QC	Memo	0.00							
Quality Control									

ML5

MAY 05 2015

ML5

MAY 05 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																													
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Picklist Print

Tuesday, April 21, 2015 1:59:11 PM

Page 1

Work Order ID: 131985

131985

Parent Item: D3303-3

D3303-3

Parent Item Name: Bracket

Start Date: 4/20/15

Required Date: 4/20/15

Start Qty: 2.00

Required Qty: 2.00

Comments:

IPP: A04.09.07New issueKJ/JLM

IPP Rev:B 08-05-13 add DT9011 jig DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.040		Purchased		No		100	sf	64.7882	0.2986	(1)			

M2024T3S 040

2024-T3 .040 sheet

Jm15-4-30

Location

Loc Qty

Loc Code

MAT022

64.7882

m130497

64.7882

130497

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

DART AEROSPACE LTD		Work Order: 131985
Description: Head Rest		Part Number: D3303-3
Inspection Dwg: D3303	Rev: B	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

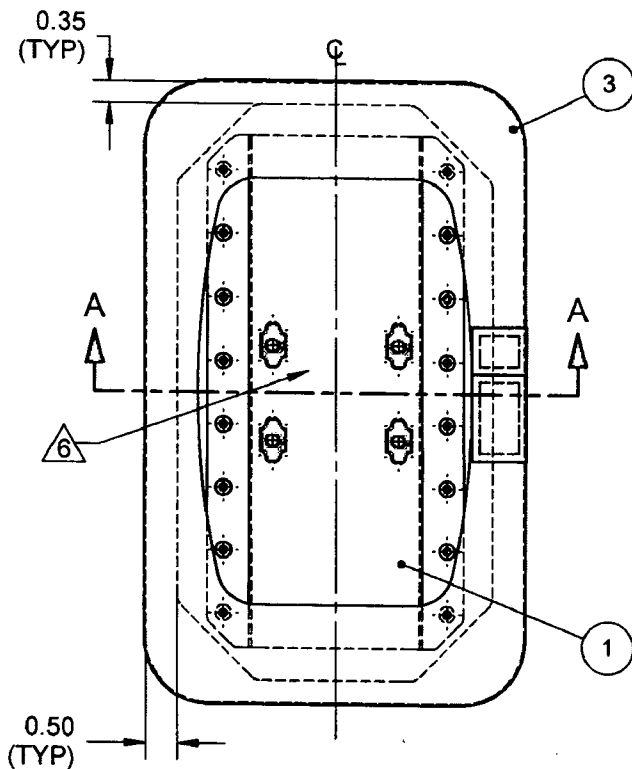
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
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4.330	+/-0.005	4.330"	-		✓	
0.550	+/-0.010	0.550"	-		✓	
0.260	+/-0.010	0.260"	-		✓	
3.300	+/-0.010	3.300"	-		✓	
1.500	+/-0.005	1.500"	-		✓	
0.250	+/-0.005	0.250"	-		✓	
Ø0.219	+0.005/-0.000	0.220"	-		✓	
Ø0.098	+0.005/-0.000	0.099"	-		✓	
Ø0.128	+0.005/-0.000	0.130"	-		✓	
R0.12	+/-0.030	0.12"	-		R6	
2.000	+/-0.005	2.000"	-		✓	
1.425	+/-0.010	1.425"	-		✓	
8.100	+/-0.010	8.100"	-		✓	
1.000	+/-0.005	1.000"	-		✓	
0.040	+/-0.010	0.040"	-		✓	

Measured by: Jm	Audited by: DAS 38 9-80	Prototype Approval:	N/A
Date: 15-4-30	Date: APR 30 2015	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.09.08	New Issue	KJ/JLM	
B	08.05.07	Dimensions updated per Dwg Rev B	KJ/DD	



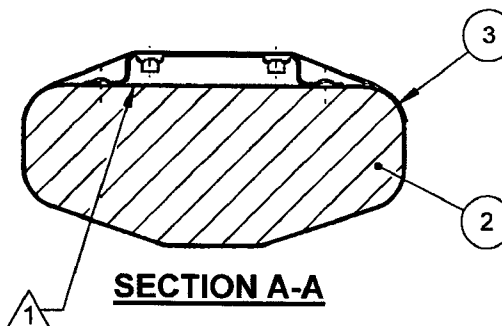
DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>PH</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3303	REV. B SHEET 1 OF 4
DATE 06.08.17		TITLE HEAD REST	SCALE 1:3
REV	DATE	DESCRIPTION	
A	04.08.18	NEW ISSUE	
B	06.08.17	UPDATED FLAT PATTERN TO FORM PART IN ONE OPERATION USING OFFSET DIE	



RELEASED

06-09-19 *[Signature]*

DEO ATTACHED



D3303-041 HEAD REST

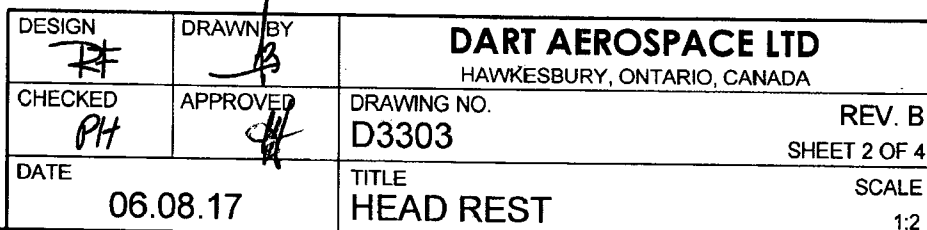
ITEM	QTY -041	P/N	DESCRIPTION
	X	D3303-041	HEAD REST
1	1	D3303-043	BRACKET ASSEMBLY
2	1	D3305-1	FOAM
3	1	D3306-041	COVER ASSEMBLY

NOTES:

- 1) BOND D3305-1 FOAM TO D3303-043 BRACKET ASSEMBLY USING 3M 1300 ADHESIVE (0.002" TO 0.010" THICK) IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS
- 2) COVER HEAD REST WITH D3306-041 COVER ASSEMBLY AS SHOWN
- 3) PART IS SYMMETRICAL AT CENTERLINE
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 6) IDENTIFY AS FOLLOWS USING FINE POINT PERMANENT INK MARKER:
"TCCA-PDA, DART AEROSPACE LTD, P/N D3303-041 B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"

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ITEM	QTY -043	P/N	DESCRIPTION
	X	D3303-043	BRACKET ASSEMBLY
1	1	D3303-1	PLATE
2	1	D3303-3	HEAD REST
3	4	MS21075L3	NUT PLATE
4	8	MS20426AD3-3	RIVET
5	16	MS20470AD4-4	RIVET

NOTES:

- 1) FINISH: POWDER COAT ASSEMBLY GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
3) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

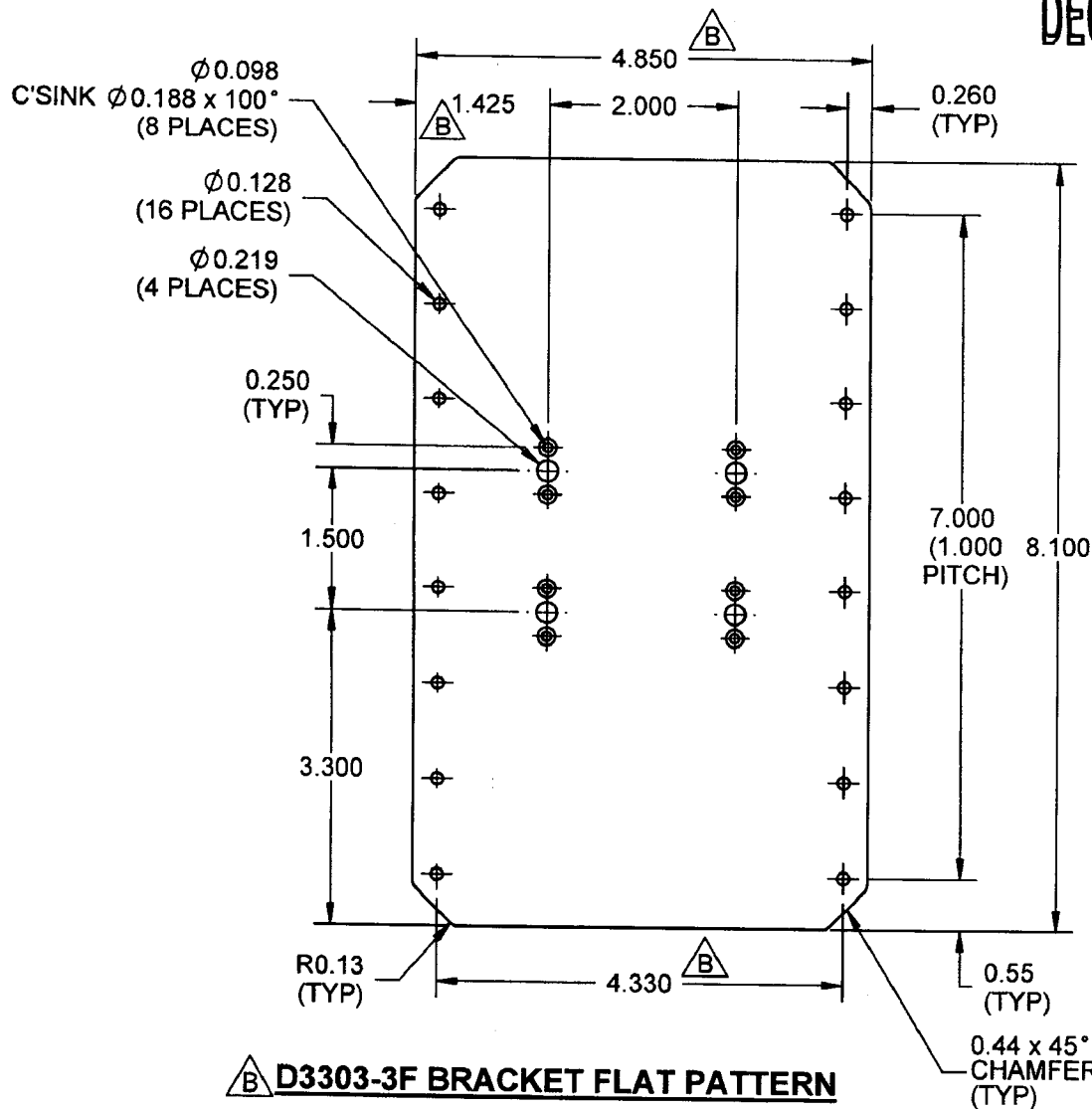
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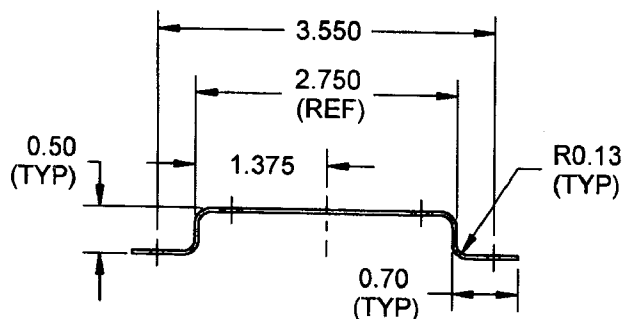


DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>PH</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3303	REV. B SHEET 4 OF 4
DATE 06.08.17		TITLE HEAD REST	SCALE 1:2

DEO ATTACHED



D3303-3F BRACKET FLAT PATTERN



D3303-3 BRACKET BEND DETAIL

NOTES:

- 1) MATERIAL: 2024-T3 (QQ-A-250/4) 0.040 THICK SHEET (REF. DART SPEC. M2024T3S.040)
- 2) FINISH: CHEMICAL CONVERSION COAT AS PER DART QSI 005.4.1
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

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DRAWING NO. D3303	TITLE HEAD REST	REV. B	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D3303-B-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN AJS	CHECKED <i>h</i>	MFG. APPR. <i>AA</i>	APPROVED <i>MD</i>		DE APPR. <i>HA</i>		
DATE 08.10.15	DATE <i>08.10.15</i>	DATE <i>08/10/16</i>	DATE <i>08/10/16</i>		DATE <i>08/10/16</i>		

SHEET 1 ADD 1300L ADHESIVE BY 3M TO NOTE 1 AS FOLLOWS:

IS:

NOTES:

- 1) BOND D3305-1 FOAM TO D3303-043 BRACKET ASSEMBLY USING 3M 1300 OR 1300L ADHESIVE (0.002" TO 0.010" THICK) IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS

WAS:

NOTES:

- 1) BOND D3305-1 FOAM TO D3303-043 BRACKET ASSEMBLY USING 3M 1300 ADHESIVE (0.002" TO 0.010" THICK) IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS

SEE NCR 08-069 FOR FURTHER DETAILS

RELEASED
08/11/16